



The Seattle Times
Fighting to Stay Above Water

Neal Peirce / Syndicated columnist
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A chilling set of three-dimensional images of climate-triggered sea rise flooding into coastal U.S. cities is due to be released this week by the environmental nonprofit group Architecture 2030.

A sea level rise as little as 1 meter could have catastrophic impact along the country's 12,000 miles of coastline, where 53 percent of Americans live, according to the group's path-breaking scientific analysis.

Such cities as Miami Beach and Hollywood, Fla., New Orleans, Hampton, Va., and Point Pleasant, N.J., would have major areas underwater with a sea rise of 1 meter or less. By a 1.5-meter rise, Miami and other Florida communities, along with East Boston, Mass., Galveston, Texas, and Atlantic City, N.J., are in deep trouble. By 3 meters, San Francisco, New York, Boston, San Diego and Savannah, Ga., fall victim to severe damage.

The new study, based on satellite imagery, tidal patterns and on-location measurements of likely coastal city "breach points," analyzes the sea-level shifts that global warming could trigger at much smaller increments than earlier reports. Images of the potential city-by-city flood-impact findings, integrated into Google Earth city images, will be available starting Monday at www.architecture2030.org.

"We have a potential calamity on our hands," says Edward Mazria, founder of Architecture 2030. "There's danger of one city after another going down. Flood insurance will evaporate. People will be forced to migrate inland; lose everything. We'll be a nation under siege, with huge pressures on our economy and school, health and food systems."

But how likely is all this to occur? Scientists, Mazria notes, are now predicting a global tipping point — potentially irreversible disintegration of ice sheets and glaciers — at roughly 450 parts per million of carbon dioxide in the atmosphere. The level is already 383 ppm and rising at 2 ppm yearly. Without an early turnaround — within the next decade, many experts believe — it may be impossible to stop today's dangerous momentum.

And that momentum may be poised for spectacular takeoff. Coal burning — the great culprit in carbon dioxide (CO₂) emissions — has begun a dangerous global expansion that could get worse very soon. About 150 new conventional coal-fired power plants are in various stages of development in the U.S. today. Elsewhere around the world, on average a new coal-fired plant opens each week. Just consider the math of their impact, as calculated by Architecture 2030:

- Home Depot — one of several firms promising CO₂ reductions — is funding the planting of 300,000 trees in cities across the U.S. The CO₂ emissions from just one medium-sized coal-fired plant, in 10 days of operation, will negate the entire effect.
- California passed legislation to cut CO₂ emissions in new cars by 25 percent and in sport-utility vehicles by 18 percent, starting in 2009. But the CO₂ emissions from only one medium-sized coal-fired plant, operating eight months a year, will cancel out the entire effort.

The only solution, Mazria says, is an immediate, complete moratorium on new coal plants — and phasing out existing coal plants with renewable fuels as rapidly as we can develop them.

Could the U.S. do this? The big challenge: Reduce the demand for added electricity, the big coal consumer. Buildings account for 78 percent of U.S. electricity use. But by applying already proven energy-conserving materials and methods to all new buildings, plus retrofitting old ones, demand could be reduced dramatically.

OK, you may say, why should we conserve electricity and halt new coal plants if China is opening a plant a week? Indeed, China already burns more coal than the U.S., Europe and Japan combined.

A big reason for China's coal expansion, Mazria says: "We have no carbon tax on the goods they manufacture. It's as if we'd sent our dirty industries there."

What's the solution? First, Mazria suggests, the U.S. should clean up its own act. And then lead the way in negotiations to bring about an international coal moratorium. The U.S., Japan and European Union consume 78 percent of Chinese exports. "If the U.S. were to join Japan and the E.U.," he suggests, "... China would be hard pressed not to respond — or agree to stop if we help them with alternative fuels technology."

OK, you say, our leaders don't have the foresight, or the moxie, to do anything like that. Maybe that's true.

But think of the alternative — a string of Katrina-scale disasters and evacuations around the perimeter of the U.S. each year, depleting our national wealth at an alarming rate.